

Abstract

Reading desired data from a remote storage device that receives chunks of data from an other storage device includes determining if the desired data is part of a chunk of data committed by the other storage device, if the desired data is not part of a chunk of data committed by the other storage device, reading the desired data from a corresponding standard logical device, and if the desired data is part of a chunk of data committed by the other storage device, transferring the desired data to the standard logical device and obtaining the desired data from one of: the standard logical device after transferring the desired data thereto and the chunk of data committed by the other storage device. Reading desired data from a remote storage device may also include, if the desired data is part of a chunk of data committed by the other storage device, locking a corresponding slot of a cache only virtual device that points to the desired data.

Reading desired data from a remote storage device may also include, locking a corresponding slot of the standard logical device, merging corresponding cache slots, and causing the corresponding slot of the cache only virtual device to point to the standard logical device.